

Application No. 10/078,473
Reply to Office Action mailed December 8, 2005

REMARKS

Reconsideration of the application is respectfully requested in view of the above amendments to the claims and the following remarks. For the Examiner's convenience and reference, Applicant's remarks are presented in the order in which the corresponding issues were raised in the Office Action.

Please note that the following remarks are not intended to be an exhaustive enumeration of the distinctions between any cited references and the claimed invention. Rather, the distinctions identified and discussed below are presented solely by way of example to illustrate some of the differences between the claimed invention and the cited references. In addition, Applicants request that the Examiner carefully review any references discussed below to ensure that Applicant's understanding and discussion of the references, if any, is consistent with the Examiner's understanding.

In the Office Action, claims 8 and 10 were rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 5,679,963 to Klem et al. ("Klem"), and claim 9 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Klem in view of U.S. Patent No. 5,268,582 to Kopf et al. ("Kopf"). Applicant appreciates the allowance of claims 1-7 and 13-21 and the indication of allowable subject matter in claims 11 and 12.

By this Response, claims 8 and 11 are amended. Claim 8 was amended to include subject matter from claim 11, which was indicated as containing allowable subject matter. Claims 1-21 remain pending in the application.

Rejection Under 35 U.S.C. §102(b)

Applicant traverses the rejection of claims 8 and 10 under 35 U.S.C. § 102(b) as being anticipated by Klem because Klem fails to disclose or suggest at least "wherein the tunnel junction is less than about 10 nanometers thick," as recited in claim 8. Klem includes several examples, each of which has a thickness layer of 150 nanometers. Col. 3, lines 3-4; col. 3, line 47; col. 3, line 67; col. 4, lines 17-18. Klem also fails to suggest a layer thinner than about 125 nanometers because Klem shows only an improvement of the tunneling distance to about 125 nanometers and fails to provide any examples or discussion of thicknesses below 150 nanometers. Because Klem fails to disclose each element of the claimed invention, claim 8 is in

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condition for allowance. Claim 10 is allowable at least for its dependence on an allowable independent claim.

Rejection Under 35 U.S.C. § 103

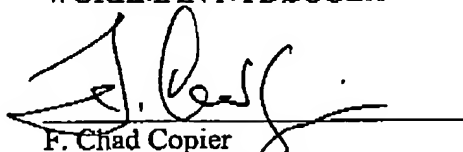
Applicant traverses the rejection of claim 9 under 35 U.S.C. § 103(a) as being unpatentable over Klem in view of Kopf because the Office Action fails to establish a *prima facie* case of obviousness. As discussed above, Klem fails to disclose or suggest every element of the claimed invention in independent claim 8, from which claim 9 depends. Kopf is not cited as correcting the deficiency in claim 8. Therefore, claim 9 is allowable at least for its dependency on allowable independent claim 8.

CONCLUSION

In view of the foregoing amendments and remarks, Applicant respectfully requests reconsideration and reexamination of this application and the timely allowance of the pending claims. The Examiner is encouraged to contact the undersigned if the Examiner believes that a telephone interview or Examiner's amendment will further the prosecution of this application.

Respectfully submitted,

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